Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

A 281.9
Ag 83E
Cop. 2

AN ECONOMIC EVALUATION of the SOUTHWESTERN NORTH CAROLINA RURAL RENEWAL AREA

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
DEC 14 1970
CURRENT SERIAL RECORDS

ERS-387
ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

PREFACE

This report was made to assist the Farmers Home Administration in planning a rural development program for Cherokee, Clay and Graham Counties, N.C. It was carried out in accordance with a 1966 memorandum of understanding between the Economic Research Service and the Farmers Home Administration.

CONTENTS

	Page
HIGHLIGHTS	iii
INTRODUCTION	1
PROJECT AREA	1
POPULATION TRENDS	6
MIGRATION TRENDS	6
EMPLOYMENT	13
Employment Covered by Unemployment Insurance	13
Commuting to Work Patterns	19
Economic Underemployment	19
Income	22
AGRICULTURE	25
MINING AND FORESTRY	32
RECREATION	32
RETAIL SALES	33
RETAIL MARKET ATTRACTION	33
COMMUNITY FACILITIES	33
Housing	37
Water Supply and Sewage Disposal	39
Health Care	39
LOCAL REVENUE	43
LOCAL GOVERNMENT EXPENDITURES	43
INDEXES OF DEVELOPMENT	53
IMPLICATIONS	58

Washington, D. C. 20250 November 1968

The study of Cherokee, Clay, and Graham Counties, North Carolina, indicated that programs are needed to provide local economic opportunity to check the migration of people from the area and to help members of households in the project area move closer to the State's level of economic activity.

To bring the level of development of the project area up to that of the State in 8 to 10 years, the needed rate of growth would be twice the current trend. Implied needs of the area are: More jobs; improved health, education, water, sanitation and housing facilities; improved roads; better local shopping facilities; and community organizations for developing and implementing economic growth plans.

From 1950 to 1960, the population of the area decreased steadily. This is the expected trend through 1980 unless more local jobs for young laborers are created.

Net outmigration between 1950 and 1960 numbered over 7,500 persons in all age groups. The outmigration rate for these years was about 22 percent. The age group 20-39 years has had and will probably continue to have the highest percentage of outmigration. This outmigration apparently stems from the shortage of local jobs suitable for young people who seek to enter the labor force.

Commuting activity in the project area is light relative to that in the other economic areas in the State. Few towns are within normal commuting range. Even so, jobs outside the area remain an important source of income to area residents.

Income per capita in the study area was higher in 1965 than in 1960. The total work force increased about 10 percent between 1960 and 1965, about the rate of gain for the State as a whole. Over the same period, the area unemployment rate dropped from 20 percent to 11 percent. However, the labor force of the area continued to be employed at less than the capacity implied by local labor force attributes.

The farm population declined about 10 percent between 1959 and 1964 in comparison with a 22-percent decline for the State. Gross farm income per farmer increased sharply from $4.3 million in 1960 to $7.4 million in 1965. The value of the principal crops grown in the project area increased slowly, about 8 percent, while in the State the increase was about 34 percent. The value of livestock products sold increased over 52 percent from 1960 to 1965--almost 20 percent higher than the increase for the State. The value of poultry and poultry products sold increased over 65 percent from 1960 to 1965, while the State as a whole rose over 72 percent.

Many residents work as miners outside the area. More local mining would add more jobs. The principal forestry activities include pulpwood operations, veneer products, and sawtimber harvesting.

Per capita household retail sales increased only 3 percent from 1960 to 1965, with 17 percent for the entire State. Retail business activity increased

slightly during that period. Many goods and services needed by residents of the area are not available locally.

The area has few hotels and motels. Construction of the planned Appalachian highways may expand the demand for tourist services, including more hotels and motels.

Total receipts from selected tax sources in the three counties have increased each year, though not as rapidly as North Carolina as a whole. Total expenditures by local governments increased over 146 percent from 1957 to 1962, compared with about 45 percent for the State. Most of the gains in the area were for education expenditures.

The percentages of deteriorating (27.5 percent) and dilapidated structures (16.6 percent) are relatively high. Protective standards and codes that set minimum requirements for construction and occupancy of dwellings are inadequate. Many families live in mobile homes.

In 1960, about 3 percent of the housing units obtained drinking water from sources other than public or private water systems. Untreated sewage from about 56 percent of all units was discharged into streams or shallow latrines.

In 1962, the project area had fewer health care resources available on a per capita basis than either North Carolina or the Nation as a whole. For example, the project area had 0.7 physicians per 1,000 population, compared with 1.0 for North Carolina and 1.4 for the Nation.

In 1965, economic activity per household in the project area was up 27 percent from the 1960 level, paralleling the increase for the State. However, economic activity by household in the project area remained about one-third below the level of the entire State.

AN ECONOMIC EVALUATION OF THE SOUTHWESTERN NORTH CAROLINA RURAL RENEWAL AREA

by

Jack Ben-Rubin
Economic Development Division
Economic Research Service

INTRODUCTION

The prospects for fostering a sound and expanding economy in slow-growing rural areas by increasing farm and nonfarm income, eliminating underemployment, stimulating business activities, and restructuring community facilities and services may be helped by an appraisal of the resources and markets of such areas. This study appraises the economic resources of a sparsely populated rural section of North Carolina to provide a basis for the initiation of Federal programs.

A comprehensive examination of the economy of a rural area necessitates an analysis of five major economic categories: population, income and employment, agriculture, business, and local government. Choice of statistical series used to describe trends and inputs under the five economic categories depends heavily on the availability of data.

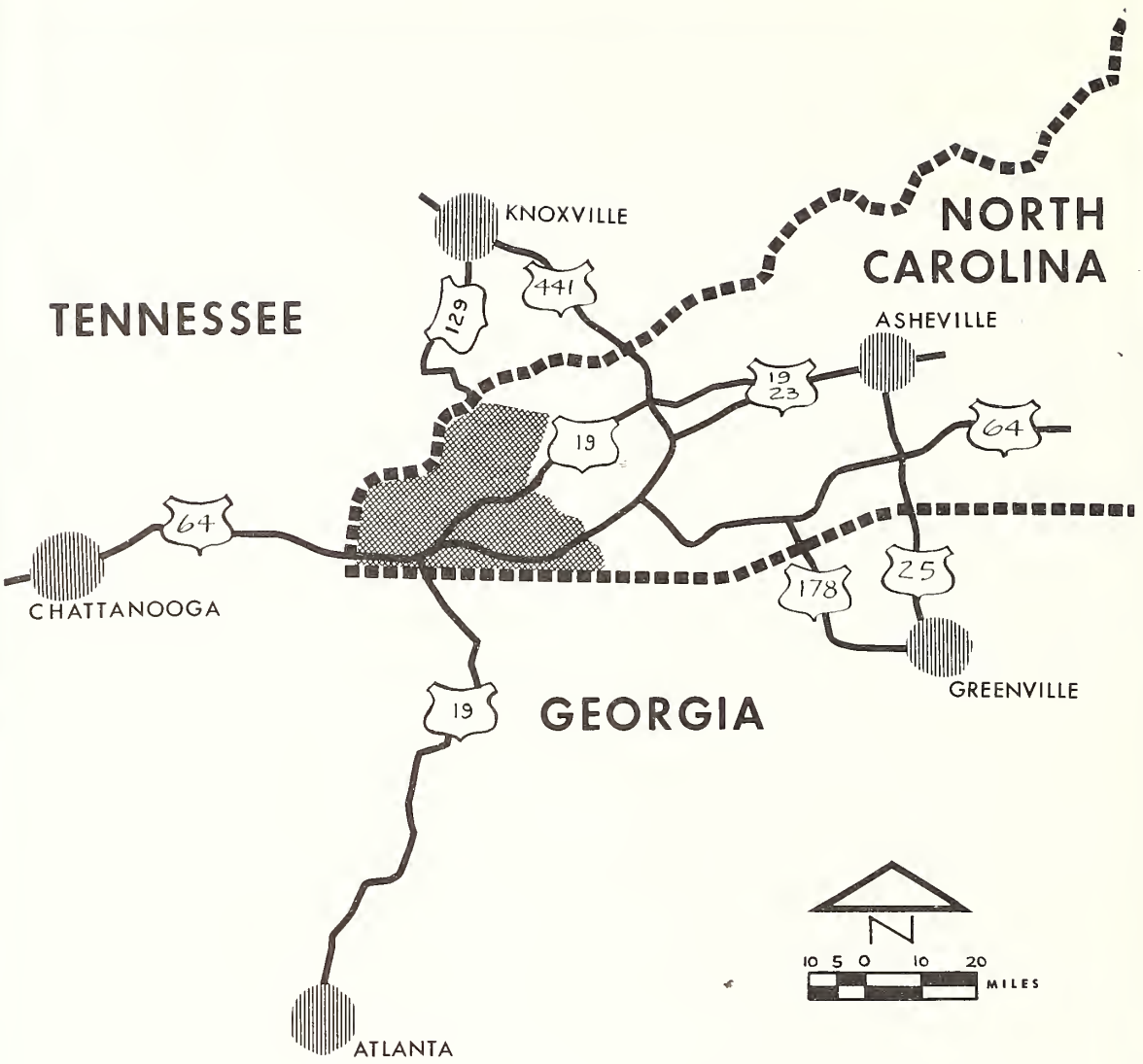
PROJECT AREA

The counties of Cherokee, Clay and Graham are located in the extreme western part of North Carolina (fig. 1). Historically, the area has been predominantly rural. It is characterized geographically by rough, steep mountainous terrain, with peaks up to 5,000 feet above sea level. The climate is moderate.

Cherokee, the largest of the project counties, lies entirely within the Hiwassee River Basin (fig. 2). Cherokee County covers 454 square miles, 83 percent of which is forest land. Principal communities are the towns of Murphy and Andrews with a population of 2,335 and 1,404, respectively. U.S. Highway No. 64 crosses the southern part of the county, and U.S. Highways Nos. 19 and 129 extend from the northeastern top of the county into Georgia. Two railroad freight lines operate in the county--one between Murphy and Asheville, the other between Murphy and Atlanta, Ga. Also serving the county are a busline and an airport that provides private air transportation.

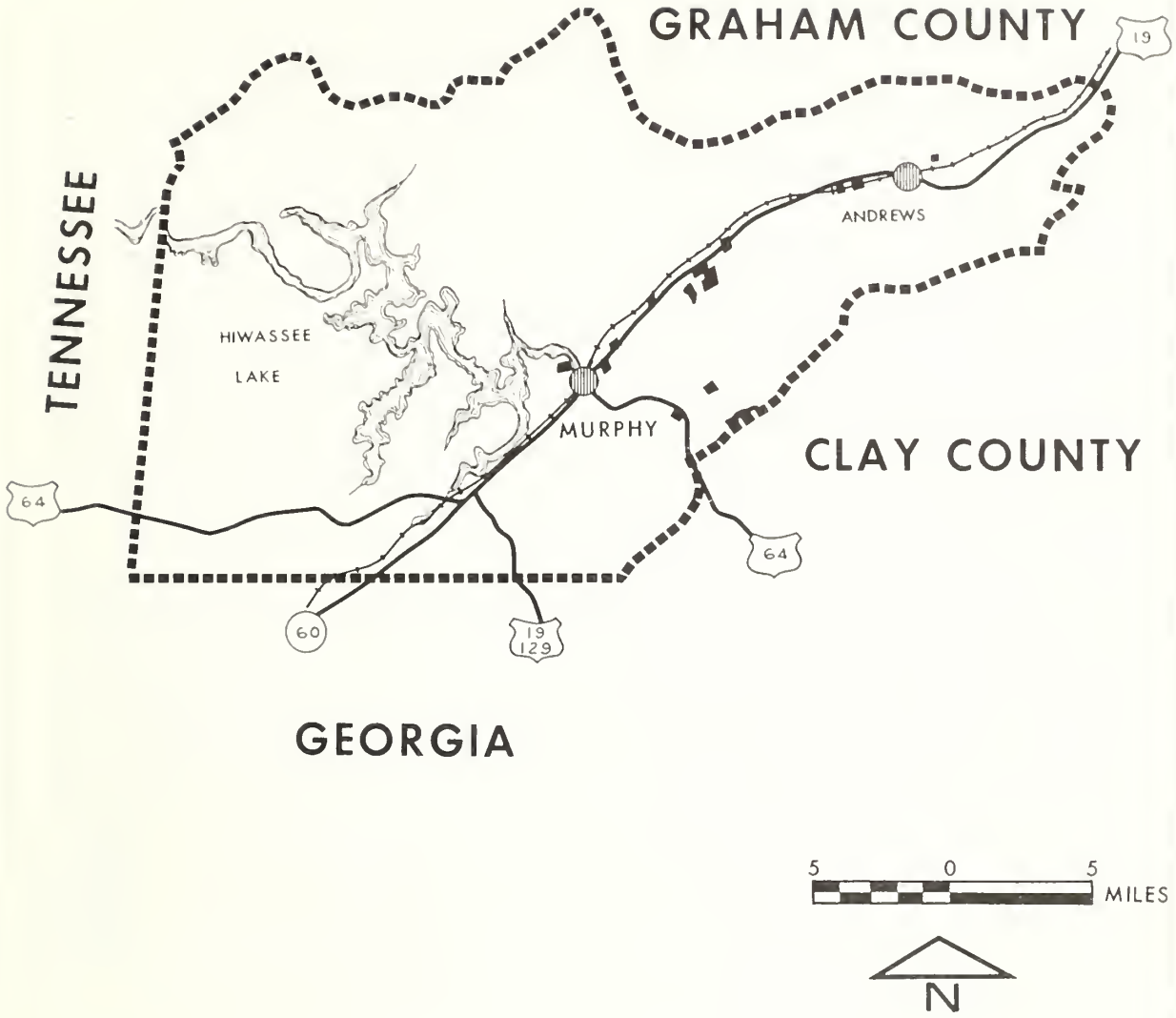
Clay County has an area of 213 square miles. Low mountains and narrow valleys form the central and western parts of the county. Eighty-six percent of the land is forest. Hayesville, population 713, is the county seat and the only town. There is no railroad or airport serving the county. U.S. Highway No. 64 serves east-west traffic; North Carolina No. 69 connects with Georgia (fig. 3).

Graham County is south of Great Smokey Mountain National Park but is separated from it by Fontana Lake, a Tennessee Valley Authority lake some 30 miles long (fig. 4). The county covers 289 square miles and contains approximately



PROJECT AREA IN THE REGIONAL PICTURE

Figure 1



CHEROKEE COUNTY

Figure 2

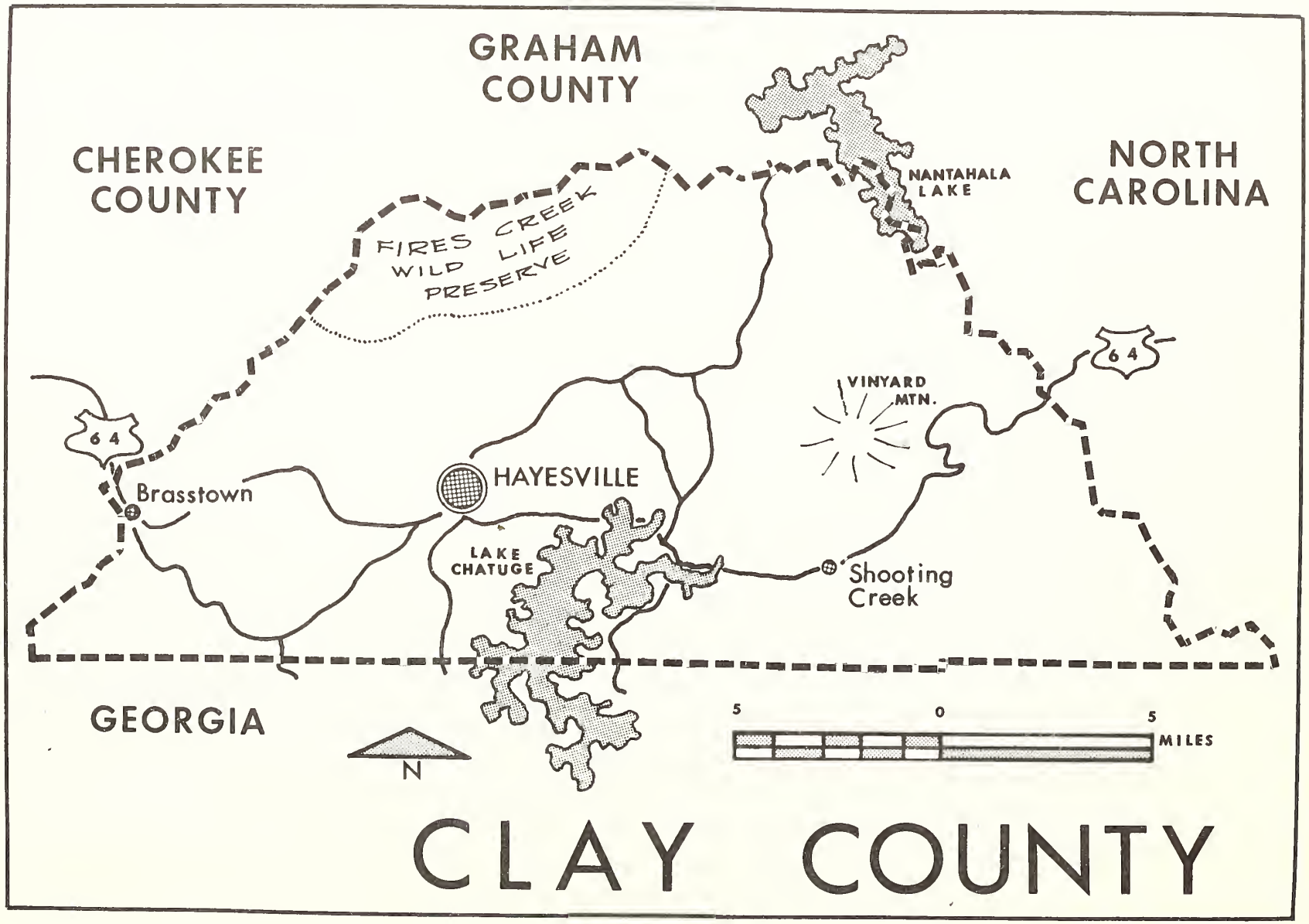

GRAHAM COUNTY
CHEROKEE COUNTY
NORTH CAROLINA
NANTAHALA LAKE
FIRES CREEK WILD LIFE PRESERVE
64
64
VINYARD MTN.
Brasstown
HAYESVILLE
LAKE CHATUGE
Shooting Creek
GEORGIA
N
5 0 5
MILES
CLAY COUNTY

Figure 4

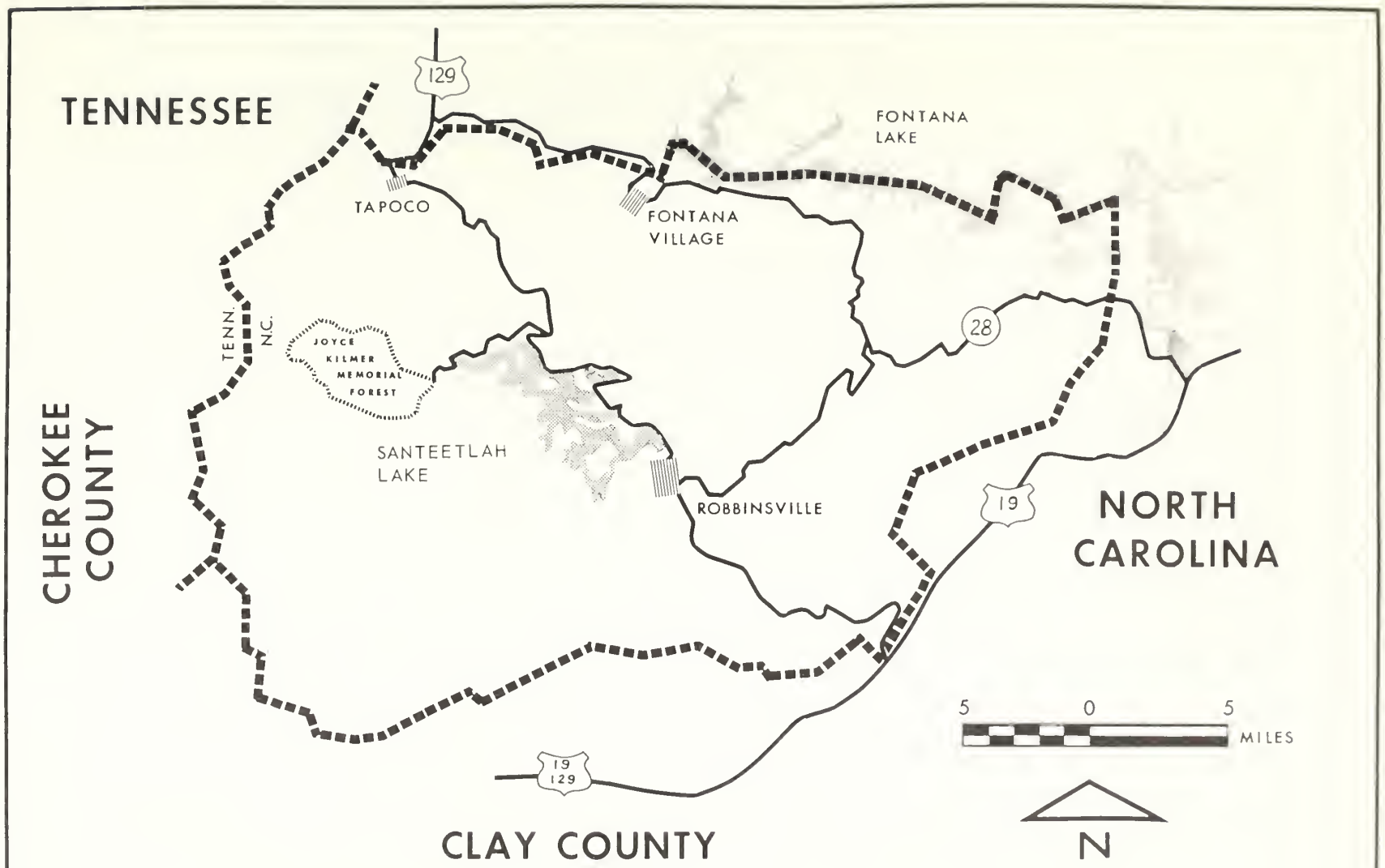

TENNESSEE
129
FONTANA LAKE
TAPOCO
FONTANA VILLAGE
TENN.
N.C.
JOYCE KILMER MEMORIAL FOREST
28
CHEROKEE COUNTY
SANTEETLAH LAKE
ROBBINSVILLE
19
NORTH CAROLINA
5 0 5
MILES
19
129
CLAY COUNTY
N
GRAHAM COUNTY

Figure 3

256 square miles of commercial forest land. The town of Robbinsville is the largest community (587 pop.). Graham has neither air service nor bus service. Freight rail service is provided by the Graham County Railroad, which connects with the Southern Railway at Topton, about 12 miles from Robbinsville.

POPULATION TRENDS

The population of the project area has been decreasing at a rate of 0.6 percent a year since 1950, while the State population has been increasing annually by 1.4 percent. According to estimates prepared by the North Carolina Department of Conservation and Development, these trends are expected to continue for the area and State through 1980 (table 1). By then, if no new job opportunities are created, the project area will have some 6,000 fewer persons than in 1960. On a county basis, the population of Cherokee, Clay and Graham is expected to drop 32.7, 29.7, and 22.1 percent, respectively, over the 20-year period, according to the North Carolina Department of Conservation and Development.

A similar set of population projections was prepared by the North Carolina State Highway Commission. Its findings also indicate that the population in the area will continue to decrease through 1980 while that of the State will continue to increase (table 2).

As shown in table 3, the population for the area decreased at an average of around 1 percent per year during 1960-65. The population loss occurred in Graham and Cherokee Counties; Clay County population rose slightly.1/ While the total population of the three counties was decreasing, the total number of households was increasing--indicating a trend toward smaller families (table 4).

Farm population of the project area and of the State decreased by more than one-fifth during 1960-65 (table 5). Trends indicate that both the area and State farm population will continue to decrease at a faster rate than the national trend in agriculture.

MIGRATION TRENDS

Net outmigration from the project area between 1950 and 1960 numbered 7,654 persons (table 6). The outmigration rate for these years was 21.4 percent. Net outmigration occurred among all age groups in the area as a whole; however, there was some net inmigration of persons 65 and over in Cherokee and Clay Counties. During the decade, there were about 23 births and 7 deaths per 100 persons implying that the area would have experienced a population growth of nearly 16 percent by natural increase, instead of a loss in population of about 6 percent.2/

1/ In table 3 and other tables, absolute values of pertinent economic indicators were indexed using the year 1960 as a base; that is, the percentage rates cited throughout this study are either increases or decreases from a 1960 base level of 100 percent.

2/ U.S. Department of Agriculture, Economic Research Service, Human Resources Branch, 1967.

Table 1.--Population and population projections by age group, project area and North Carolina, 1950-80

Year	Area and division	Age group				All ages
		0-19 years	20-39 years	40-64 years	65 and over	
		Number	Number	Number	Number	Number
1950	North Carolina...	1,677,441	1,289,505	869,686	225,297	4,061,929
	Project area...	14,281	8,194	6,537	2,174	31,186
	Cherokee.....	8,342	4,812	3,852	1,288	18,294
	Clay.....	2,701	1,533	1,281	491	6,006
	Graham.....	3,238	1,849	1,404	395	6,886
1960	North Carolina...	1,929,240	1,227,725	1,087,023	312,167	4,556,155
	Project area...	12,056	6,211	7,211	2,815	28,293
	Cherokee.....	6,823	3,626	4,194	1,692	16,335
	Clay.....	2,325	1,117	1,453	631	5,526
	Graham.....	2,908	1,468	1,564	492	6,432
1970	North Carolina...	2,053,506	1,274,789	1,233,479	416,146	4,977,920
	Project area...	9,486	5,208	7,052	3,274	25,020
	Cherokee.....	5,193	3,016	4,126	1,912	14,247
	Clay.....	1,811	889	1,404	772	4,876
	Graham.....	2,482	1,303	1,522	590	5,897
1980	North Carolina...	2,268,418	1,524,416	1,213,574	541,511	5,547,919
	Project area...	8,012	4,421	5,696	3,795	21,924
	Cherokee.....	4,286	2,492	3,328	2,223	12,329
	Clay.....	1,467	759	1,104	895	4,225
	Graham.....	2,259	1,170	1,264	677	5,370

Source: 1980 Population Projections. North Carolina Department of Conservation and Development. Raleigh, N. C. 1963.

Table 2.--Population and population estimates, project area and North Carolina, (1900-80)

Year	Cherokee	Clay	Graham	Project area	North Carolina
1900	11,900	4,500	4,300	20,700	1,893,800
1910	14,100	3,900	4,700	22,700	2,206,300
1920	15,200	4,600	4,900	24,700	2,559,100
1930	16,200	5,400	5,800	27,400	3,170,300
1940	18,800	6,400	6,400	31,600	3,571,600
1950	18,300	6,000	6,900	31,200	4,061,900
1960	16,700	5,500	7,200	29,400	4,556,200
1970	15,200	5,100	7,200	27,500	5,260,300
1980	14,300	4,800	7,800	26,900	6,190,000

Source: 1900-60: Bureau of the Census. Projections: North Carolina State Highway Commission.

Table 3.--Population estimates as of July 1, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Number	Number	Number	Number	Number
1960	16,300	5,500	6,400	28,200	4,537,200
1961	16,300	5,500	6,400	28,200	4,608,700
1962	16,000	5,500	6,300	27,800	4,659,700
1963	15,900	5,600	6,200	27,700	4,768,800
1964	15,600	5,600	6,000	27,200	4,801,900
1965 1/	15,600	5,600	6,000	27,200	4,847,000
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	100	100	100	100	102
1962	98	100	98	99	103
1963	98	102	97	98	105
1964	96	102	94	96	106
1965 1/	96	102	94	96	107

1/ Jan. 1, 1966.

Source: SRDS Consumer Market Data, 1961-66. Standard Rate and Data Service, Inc. Skokie, Ill.

Table 4.--Households as of July 1, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Number	Number	Number	Number	Number
1960	3,980	1,400	1,540	6,920	1,151,380
1961	4,360	1,490	1,630	7,480	1,218,520
1962	4,270	1,480	1,590	7,340	1,231,710
1963	4,240	1,510	1,560	7,310	1,260,950
1964	4,160	1,510	1,510	7,180	1,269,710
1965 1/	4,160	1,510	1,510	7,180	1,281,760
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	110	106	106	108	106
1962	107	106	103	106	107
1963	107	108	101	106	110
1964	104	108	98	104	110
1965 1/	104	108	98	104	111

1/ Jan. 1, 1965.

Source: SRDS Consumer Market Data, 1961-66. Standard Rate and Data Service, Inc. Skokie, Ill.

Table 5.--Farm population estimates, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Number	Number	Number	Number	Number
1960...	2,800	2,700	2,800	8,300	980,000
1961...	2,400	2,300	2,400	7,100	814,800
1962...	2,400	2,300	2,400	7,100	812,200
1963...	2,400	2,300	2,400	7,100	812,200
1964...	2,300	2,200	2,300	6,800	789,500
1965...	2,200	2,100	2,200	6,500	755,500
	Indexes (1960=100)				
1960...	100	100	100	100	100
1961...	86	85	86	86	83
1962...	86	85	86	86	83
1963...	86	85	86	86	83
1964...	82	81	82	82	81
1965...	79	78	79	78	77

Source: SRDS Consumer Market Data, 1961-66. Standard Rate and Data Service, Inc. Skokie, Ill.

Table 6.--Net migration of the population in the project area and North Carolina, 1950-60 1/

Age on birthday in 1960	Net migration, 1950-60				
	Cherokee	Clay	Graham	Project area	North Carolina
	Persons				
Under 20..	-1,720	-441	-475	-2,636	-84,260
20-39.....	-2,387	-882	-949	-4,218	-194,384
40-64.....	-452	-97	-219	-768	-47,224
65 & over.	10	19	-61	-32	-2,154
All ages..	-4,549	-1,401	-1,704	-7,654	-328,022
	Migration rate, 1950-60				
	Percent				
Under 20..	-20.1	-15.8	-13.9	-17.9	-4.1
20-39.....	-39.7	-44.2	-39.2	-40.4	-13.6
40-64.....	-10.3	-6.2	-12.2	-9.9	-4.1
65 & over.	0.1	2.9	-11.0	-1.1	-0.6
All ages..	-21.8	-20.2	-20.9	-21.4	-7.6

1/ The net migration rates for age groups, and for the county, project area and State totals are estimates expressed as a percentage of the 1960 survivors (after inclusion of adjustments made in the net migration estimates) of the 1950 population and births during 1950-60.

Source: Net Migration of the Population, 1950 to 1960, by Age, Sex, and Color, Vol. 1, Part 1. U.S. Department of Agriculture, Economic Research Service, in cooperation with the Research Foundation, Oklahoma State University and the Area Redevelopment Administration, U.S. Department of Commerce. 1965.

The age group 20-39 years had the highest percentage of outmigration. Continued outflow of this working age group will occur if the area fails to provide sufficient employment for young workers entering the labor market. The current U.S. job market requires increasing proportions of high school graduates. But since there are limited job opportunities in the project area, the young graduates, who represent a valuable human resource, are migrating to employment outside the counties. As shown in table 7, the number of graduates entering the labor market in 1965 was 26 percent above 1960.

The only age group that is likely to experience an increase in population by 1980 is that of persons 65 years and older. This reflects both the tendency of elderly persons in the area to remain in a familiar environment and the influx of persons seeking retirement homes.

EMPLOYMENT

Population changes in the project area are resulting in more persons attaining working age than are leaving the work force through death or retirement. In Clay County, 186 persons were estimated to have attained working age for each 100 leaving. This means that for each 100 job vacancies there were an additional 86 persons to find new jobs, remain unemployed, or migrate out of the area. The replacement ratios for Graham and Cherokee Counties were higher than Clay, 196 and 214, respectively. These ratios compare with 219 for the State as a whole and 177 for the Nation.

The civilian work force of the area was estimated to be close to 9,000 persons in 1965, up around 800 workers from 1960 (table 8). Most of the increase in the work force occurred in 1965, chiefly because of employment gains in manufacturing and in the category "all other employment" (table 9). This category includes agricultural, nonagricultural, self-employed, and unpaid family and domestic workers. Since 1965, two new plants--one a television corporation, the other a tire company--have provided further gains in labor force participation and employment. The total number of workers at these plants may rise from 600 in 1967 to 2,000 in a few years.

With the total labor force little changed from 1960 to 1964 and with employment expanding, the level of unemployment decreased steadily. Since 1964, unemployment declined further accompanied by a strong increase in the number of jobs and by a larger labor force. With significant gains in the number of jobs during 1960-65, the level of unemployment improved more rapidly in the project area than in the State; however, the rate of unemployment in the project area remained considerably higher than in the State, 11.6 percent compared with 4.2 percent.

Employment Covered by Unemployment Insurance

In 1960, about 38 percent of total employment was covered by unemployment insurance (table 10). Covered employment rose subsequently faster than total employment and accounted for nearly half of total employment by 1965. During 1960-65, covered employment increased by about 1,000 workers but total employ-

Table 7.--Estimates of high school graduates entering the labor market, project area and North Carolina, 1960-65

Year	Cherokee		Clay		Graham		Project area		North Carolina	
	Total	Number entering labor market	Total	Number entering labor market	Total	Number entering labor market	Total	Number entering labor market	Total	Number entering labor market
1960	194	153	63	46	80	50	337	249	45,332	23,461
1961	252	174	89	48	107	60	448	282	50,377	24,729
1962	231	141	70	38	73	47	374	226	48,427	22,986
1963	226	141	81	56	76	54	383	251	48,654	23,385
1964	225	144	64	42	86	67	375	253	53,103	24,921
1965	299	178	77	41	113	95	489	314	67,337	29,941
	Indexes (1960=100)									
1960	100	100	100	100	100	100	100	100	100	100
1961	130	114	141	104	134	120	133	113	111	105
1962	119	92	111	83	91	94	111	91	107	98
1963	116	92	129	122	95	108	114	101	107	100
1964	116	94	102	91	108	134	111	102	117	106
1965	154	116	122	89	141	190	145	126	148	128

Source: North Carolina Work Force Estimates by Labor Area. Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N. C. July-1966.

Table 8.--Civilian work force estimates, project area and North Carolina, annual averages, 1960-65.

Area	Civilian work force	Unemployment, total	Percent unemployment	Employment, total
Cherokee:				
1960	4,840	1,015	21.0	3,825
1961	5,045	1,165	23.1	3,880
1962	4,900	930	19.0	3,970
1963	4,700	700	14.9	4,000
1964	4,980	640	12.9	4,340
1965	5,670	540	9.5	5,130
	Indexes (1960=100)			
1960	100	100		100
1961	104	115		101
1962	101	92		104
1963	97	69		105
1964	103	63		113
1965	117	53		134
Clay:				
1960	1,705	440	25.8	1,265
1961	1,810	485	26.8	1,325
1962	1,610	250	15.5	1,360
1963	1,625	290	17.8	1,335
1964	1,480	200	13.5	1,280
1965	1,490	220	14.8	1,270
	Indexes (1960=100)			
1960	100	100		100
1961	106	110		105
1962	94	57		108
1963	95	66		105
1964	87	45		101
1965	87	50		100
Graham:				
1960	1,650	300	18.2	1,350
1961	1,655	310	18.7	1,345
1962	1,810	440	24.3	1,370
1963	1,830	400	21.9	1,430
1964	1,810	300	16.6	1,510
1965	1,820	285	15.7	1,535
	Indexes (1960=100)			
1960	100	100		100
1961	100	103		100
1962	110	147		101
1963	111	133		106
1964	110	100		112
1965	110	95		114

Table 8.--Civilian work force estimates, project area and North Carolina, annual averages, 1960-65--Continued

Area	Civilian work force	Unemployment, total	Percent unemployment	Employment, total
Project area:				
1960	8,195	1,755	21.4	6,440
1961	8,510	1,960	23.0	6,550
1962	8,320	1,620	19.5	6,700
1963	8,155	1,390	17.0	6,765
1964	8,270	1,140	13.8	7,130
1965	8,980	1,045	11.6	7,935
	Indexes (1960=100)			
1960	100	100		100
1961	104	112		102
1962	102	92		104
1963	100	79		105
1964	101	65		111
1965	110	60		123
North Carolina:				
1960	1,787,600	80,400	4.5	1,707,200
1961	1,825,200	96,500	5.3	1,728,700
1962	1,865,600	98,800	5.3	1,766,800
1963	1,912,200	97,500	5.1	1,814,700
1964	1,941,950	93,150	4.8	1,848,800
1965	1,990,300	83,200	4.2	1,907,100
	Indexes (1960=100)			
1960	100	100		100
1961	102	120		101
1962	104	123		103
1963	107	121		106
1964	109	116		108
1965	111	104		112

Source: North Carolina Work Force by Labor Area. Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N.C. July 1966.

Table 9.--Employment by industry, project area and North Carolina, 1960-65

Area	Manufacturing	Construction	Transportation, communication, and public utilities	Trade	Finance, insurance, and real estate	Service	Government	Other nonmanufacturing	All other employment
Cherokee:									
1960.....	1,050	30	80	470	50	310	485	140	1,210
1961.....	1,060	40	80	485	55	320	490	130	1,220
1962.....	1,110	45	65	485	65	330	490	140	1,240
1963.....	1,160	55	60	520	80	350	500	125	1,150
1964.....	1,420	65	60	550	85	350	510	125	1,175
1965.....	1,760	70	60	560	100	340	520	140	1,580
Clay:									
1960.....	190	5	0	105	0	85	140	5	735
1961.....	240	5	0	90	0	90	130	15	755
1962.....	270	5	0	90	0	80	150	5	760
1963.....	240	10	0	85	0	75	170	0	755
1964.....	220	10	0	95	5	75	170	0	705
1965.....	230	20	0	80	5	75	160	0	700
Graham:									
1960.....	280	70	65	55	0	60	285	0	535
1961.....	270	80	65	55	5	60	285	0	525
1962.....	300	60	60	65	25	60	280	0	520
1963.....	350	80	60	65	10	50	290	0	525
1964.....	360	110	65	70	15	50	290	0	550
1965.....	400	90	70	70	20	40	280	0	565
Project area:									
1960.....	1,520	105	145	630	50	455	910	145	2,480
1961.....	1,570	125	145	630	60	470	905	145	2,500
1962.....	1,680	110	125	640	90	470	920	145	2,520
1963.....	1,750	145	120	670	90	475	960	125	2,430
1964.....	2,000	185	125	715	100	475	970	130	2,430
1965.....	2,390	180	130	710	125	455	960	140	2,845
North Carolina:									
1960.....	511,100	65,600	63,300	221,800	41,800	130,200	158,800	5,800	508,800
1961.....	508,400	66,600	64,200	223,200	44,450	131,700	168,900	6,450	514,800
1962.....	530,600	68,250	66,450	231,200	46,600	134,600	178,850	6,100	504,150
1963.....	541,100	71,070	67,550	239,000	48,700	141,650	184,350	5,415	515,865
1964.....	503,150	74,850	71,000	248,250	50,400	147,200	190,350	5,150	498,450
1965.....	597,700	84,250	74,000	261,000	52,550	152,600	196,500	5,400	483,100

Source: North Carolina Work Force by Labor Area. Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N.C. July 1966.

Table 10.--Annual average insured total employment and unemployment, project area and North Carolina, 1960-65

Year	Cherokee		Clay		Graham		Project area		North Carolina	
	Employment	Unemployment	Employment	Unemployment	Employment	Unemployment	Employment	Unemployment	Employment	Unemployment
	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
1960	1,711	314	252	76	473	136	2,436	526	888,711	37,957
1961	1,729	336	298	81	479	145	2,506	562	895,890	27,168
1962	1,786	269	315	65	493	116	2,594	450	934,407	34,802
1963	1,896	278	284	67	533	120	2,713	465	965,293	35,993
1964	2,205	281	266	47	595	128	3,066	456	1,014,145	32,967
1965	2,587	256	269	55	614	105	3,470	416	1,070,557	25,555
	Indexes (1960=100)									
1960	100	100	100	100	100	100	100	100	100	100
1961	101	107	118	107	101	107	103	107	101	72
1962	104	86	125	86	104	85	106	86	105	92
1963	111	89	113	88	113	88	111	88	109	95
1964	129	89	106	62	126	94	126	87	114	87
1965	151	82	107	72	130	77	142	79	120	67

Source: Work Force Estimates by Labor Areas. Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N.C. July 1966.

ment gained only 800, implying a net decrease of around 200 workers from among those not covered by unemployment insurance.

Commuting to Work Patterns

Commuting activity in the project area is light relative to that in the major economic areas in the State of North Carolina. This may be attributed to the fact that the counties have relatively few employment centers within commuting range.

Five hundred and ninety-five project area residents, representing 7 percent of the labor force, commuted to jobs outside the area in 1960. Almost half of the commuters, 293, worked in the adjoining States of Tennessee and Georgia. Of the out-of-State commuters, 205 were employed as miners by one of the largest producers of copper in Polk County, Tenn. All of these commuters resided in Cherokee County. In addition, 70 persons worked outside their home county but elsewhere in the project area, bringing the total number of "out" commuters on a county basis to 665. On the other hand, 193 workers residing outside the project area commuted into the area to work, while 70 workers residing in the project area commuted to another project county. Therefore, there was a net of 402 "out" commuters (table 11).

By far, Cherokee County had the greatest number of net "out" commuters--305. Four hundred and sixty-three persons who lived in Cherokee County worked outside the county in comparison with 158 persons who lived outside the county but worked in Cherokee County.

Clay County, with only 97 commuting out against 79 commuting in netted 18 outcommuters. About one-third of the Clay outcommuters worked outside the State, mostly in Union County, Ga. Graham County had about the same number of outcommuters as Clay, but fewer commuting in.

Economic Underemployment

Estimates of underemployment provide a measure of economic utilization of labor. For 1959, underemployment estimates indicate that area workers had jobs that produced less income and output than the same labor force might have been expected to earn in the general U.S. labor market. Furthermore, reported gains since then in total employment and earnings, accompanied by a reduction in the conventionally measured unemployment, have not led to a measurable improvement in the underutilization of area workers.

In 1959, the median incomes of males 14 years and older with income in Cherokee, Clay, and Graham Counties were $1,744, $1,250, and $2,009, respectively (table 12). Based on the 1960 U.S. Census of Population, these incomes were much lower than the median income of $4,111 for males at the national level. Much of the lower income was due to the larger percentage in the area than in the Nation of old and young workers in the labor force, a lower average level of education, and a smaller participation of the male population in the labor force.

Table 11.--Distribution of net "out" and "in" commuting, intraproject area and outside project area, 1960

Subject county	"Out" commuters[1]		"In" commuters[2]	Net commuters[3]
Cherokee	Clay	26	0	-26
	Graham	4	32	+28
	Total	30	32	+2
	Outside area	433	126	-307
	Total commuters	463	158	-305
Clay	Cherokee	0	26	+26
	Graham	4	4	0
	Total	4	30	+26
	Outside area	93	49	-44
	Total commuters	97	79	-18
Graham	Cherokee	32	4	-28
	Clay	4	4	0
	Total	36	8	-28
	Outside area	69	18	-51
	Total commuters	105	26	-79
Project area	Intra-area	70	70	0
	Outside area	595	193	-402
	Total commuters	665	263	-402

1/ Number commuting from subject county to area counties or commuting outside the area.

2/ Number commuting to subject county from area counties or outside the area.

3/ Plus (+) means net "in" commuting; minus (-) means net "out" commuting.

Source: Commuting Patterns in North Carolina, 1960. North Carolina Department of Conservation and Development.

Table 12.--Economic underemployment of males 14 years and older in Cherokee, Clay, and Graham Counties, N.C., 1959 and 1964

Item	1959			1964		
	Cherokee	Clay	Graham	Cherokee	Clay	Graham
A. Civilian labor force (males)...	1/ 3,206	1/ 1,250	1/ 1,338	2/ 3,586	2/ 1,175	2/ 1,415
B. Median income....dollars.....	1/ 1,744	1/ 1,250	1/ 2,009	3/ 2,026	3/ 1,301	3/ 2,519
C. Estimated equivalent median income 4/.....dollars.....	3/ 2,888	3/ 2,884	3/ 2,739	5/ 3,356	5/ 3,351	5/ 3,182
D. Unemployment equivalent of underemployment 6/.....	1,270	708	357	1,420	719	296
E. Estimated percentage of income unattained 7/.....	39.6	56.7	26.7	39.7	61.2	20.9

1/ Bureau of the Census.
2/ Work Force Estimates by Labor Areas. Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N.C. July 1966.
3/ U.S. Department of Agriculture.
4/ Assuming labor earns at the same rate as comparable labor earned nationally.
5/ Obtained by applying the percentage change in per capita income from 1959 to 1964 at the national level to the 1959 estimated equivalent median income.
6/ Obtained by applying the percentage in line E to the labor force in line A.
7/ Obtained by dividing B by C and subtracting the results from 1.00.

Assuming that the labor force in the area had been utilized in a manner comparable to the national average, it is estimated that median earnings of the male labor force of Cherokee, Clay, and Graham Counties would be around $2,888, $2,884, and $2,739, respectively. A comparison of the observed incomes of these counties with the imputed national incomes for a labor force with similar characteristics indicates a level of underemployment for Cherokee, Clay, and Graham Counties of 40, 57, and 27 percent, respectively. On a full-time equivalent basis, this results in area income and output about the same as if an additional 2,335 workers in the area were unemployed and the rest of the labor force worked at full capacity.

Between 1959 and 1964, the rate of underemployment did not appear to change much in the project area. The median income estimates used to estimate underemployment in 1964 are based on an observed correlation of 1959 county median incomes in North Carolina with 1958 wages paid production workers in manufacturing (table 12). A rise of $100 per year in manufacturing wages per production worker in 1958 corresponded to a $92 rise in 1959 county median incomes. The average wage in manufacturing in Cherokee, Clay, and Graham Counties rose $434, $87, and $699 from 1958 to 1963; consequently, the counties' median income rose $282, $51, and $510, respectively, to levels of $2,026, $1,301, and $2,519 by 1964. The relatively high rates of underemployment in the project area indicate that the available labor force has the capacity to generate more income than it does, but that local demand for this labor is insufficient.

Income

Effective buying income 3/ for the project area was $32.7 million in 1965 or 16 percent above the 1960 income level (table 13). About four-fifths of the increase occurred in Cherokee County, which gained 22 percent during 1960-65. The rate of gain in the level of income for the project area during 1960-65 was only one-half the rate achieved in North Carolina. This indicates that on a total basis the economy of the project area expanded at a much slower rate than the rest of North Carolina.

A brighter picture evolves when income is adjusted for population differences, however. Income estimates expressed on a per capita basis show that the project area as a whole gained at a rate only slightly below that of the State, while Cherokee County gained at a higher rate (table 14). The rapid gain in Cherokee County is partly reflected in a greater rate of gain in employment participation. For every 100 people in that county in 1960 only 23 were employed; by 1965, 33 were employed. This gain of 10 workers per 100 people contributed substantially to the rise in both aggregate and per capita income in the area.

The difference in the per capita picture and the total picture with respect to income is in part a reflection of population losses in the project

3/ Income after deductions of personal tax and non-tax to Federal, State and local governments.

Table 13.--Estimates of effective buying income, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.
1960...	16,335	5,274	6,643	28,252	6,773,421
1961...	16,203	4,660	5,679	26,542	6,812,096
1962...	17,072	4,915	5,924	27,911	7,206,100
1963..	17,476	5,159	6,217	28,852	7,600,105
1964...	18,405	5,474	6,597	30,476	8,188,632
1965...	19,942	5,708	7,097	32,747	8,882,708
	Indexes (1960=100)				
1960...	100	100	100	100	100
1961...	99	88	85	94	101
1962...	104	93	89	99	106
1963...	107	98	94	102	112
1964...	113	104	99	108	121
1965...	122	108	107	116	131

Source: Copyright 1961-66. Sales Management Survey of Buying Power. Sales Management, Inc., New York, N. Y. Further reproduction is prohibited without permission of the publisher.

Table 14.--Estimates of effective buying income per capita and per household, project area and North Carolina, 1960-65

Year	Cherokee		Clay		Graham		Project area		North Carolina	
	Per cap.	Per hshld.	Per cap.	Per hshld.	Per cap.	Per hshld.	Per cap.	Per hshld.	Per cap.	Per hshld.
	Dollars		Dollars		Dollars		Dollars		Dollars	
1960	1,002	4,104	959	3,767	1,038	4,314	1,002	4,083	1,493	5,883
1961	994	3,716	847	3,128	887	3,484	941	3,548	1,478	5,590
1962	1,067	3,998	894	3,321	940	3,726	1,004	3,803	1,546	5,850
1963	1,099	4,122	921	3,417	1,003	3,985	1,042	3,947	1,594	6,027
1964	1,180	4,424	978	3,625	1,100	4,367	1,120	4,245	1,705	6,449
1965	1,278	4,794	1,019	3,780	1,183	4,700	1,204	4,561	1,833	6,930
	Indexes (1960=100)									
1960	100	100	100	100	100	100	100	100	100	100
1961	99	91	88	83	85	81	94	87	99	95
1962	106	97	93	88	91	86	100	93	104	99
1963	110	100	96	91	97	92	104	97	107	102
1964	118	108	102	96	106	101	112	104	114	110
1965	128	117	106	100	114	109	120	112	123	118

Source: Developed from data in tables 3,4, and 13.

area. In 1960, there were 28,200 people in the three counties and by 1965 only 27,200 (table 3). In contrast, State population gains were around 7 percent during the 5-year period.

It should be pointed out, however, that the level of per capita income in the project area was considerably below the State level. In 1960, the per capita income in the project area was 67 percent of the State; by 1965 it declined to 66 percent.

While the rate of gain in per capita income in the project area was greater than the rate for total income, the rate of gain in income per household was smaller. From 1960 to 1965, income per household grew only 12 percent, compared with 16 percent for total income. It should be remembered, however, that income per family member increased over the observed period. The difference is due to a larger number of households, but smaller families in 1965 than in 1960.

Earnings per week in industrial employment and manufacturing averaged much lower in the area than in the State--around 80 cents on the dollar (table 15). They were particularly lower in Cherokee and Clay Counties. However, percentage gains in earnings from 1960 to 1965 in the area were only slightly below the gain in the State.

There are four banks in the project area, all owned by the same company. The home office is located in Andrews in Cherokee County. Three branch offices are located in Murphy, Cherokee County; Hayesville, Clay County; and Robbinsville, Graham County.

Despite observed lags in income, banking activity increased faster than any other economic activity in the area. In fact total deposits in the area rose slightly faster than in the State as a whole (table 16). On a per capita basis the gains were impressive. In the project area, per capita deposits in 1965 were 56 percent greater than in 1960, compared with a 38-percent gain during this period in the State (table 17). Nevertheless, the level of deposits per capita in the project area continued below the State in 1965, $479 compared with $778.

AGRICULTURE

Most of the area's farm population still resides on small, marginal farms; but with limited opportunity for nonfarm employment to supplement farmers' incomes, many families have moved out. Consequently, the number of farms in the project area declined from 2,041 in 1959 to 1,828 in 1964 (table 18). However, this 10-percent decline was less than half the overall drop of 22 percent for the State.

Despite the decrease in the number of farms the agricultural sector remains a vital source of expanding income in the project area. As shown in table 18, the value of all products sold increased faster in the area than in the State. Most of the gains in the area came from increased production and sales of livestock and poultry products in Cherokee and Clay Counties. Graham County had a few more farms in 1964 than in 1959 but received 12 percent less from sales of farm products. Even so, land and building values per farm rose

Table 15.--Annual weekly earnings, project area and North Carolina, 1960-65

Year	Cherokee		Clay		Graham		Project area 1/		North Carolina	
	All industries	Manufacturing	All industries	Manufacturing	All industries	Manufacturing	All industries	Manufacturing	All industries	Manufacturing
	Dollars		Dollars		Dollars		Dollars		Dollars	
1960	52.75	50.12	52.57	55.73	66.22	58.51	57.18	54.79	68.81	68.25
1961	55.58	55.38	48.16	49.18	73.58	62.82	59.11	55.79	70.82	70.03
1962	57.76	56.43	53.07	55.06	70.78	68.85	60.54	60.11	74.16	73.31
1963	57.39	55.68	53.54	53.51	72.70	72.28	61.21	60.49	76.36	75.69
1964	61.90	59.83	57.10	56.92	76.89	77.51	65.30	64.75	80.18	79.94
1965	61.32	58.32	60.80	58.75	80.08	81.77	67.40	66.28	84.00	83.85
	Indexes (1960=100)									
1960	100	100	100	100	100	100	100	100	100	100
1961	105	110	92	88	111	107	103	102	103	103
1962	109	113	101	99	107	118	106	110	108	107
1963	109	111	102	96	110	124	107	110	111	111
1964	117	119	109	102	116	132	114	118	117	117
1965	116	116	116	105	121	140	118	121	122	123

1/ Income values for the project area are the averages of the income values for the counties. These values differ only slightly from values computed by weighing the county income values by employment.

Source: Work Force Estimates by Labor Areas, Employment Security Commission of North Carolina, Bureau of Employment Security Research. Raleigh, N.C. July 1966.

Table 16.--Bank deposits as of June 30, project area and North Carolina, 1960-65 1/

Year	Cherokee			Clay			Graham			Project area			North Carolina		
	Total	Demand	Time	Total	Demand	Time	Total	Demand	Time	Total	Demand	Time	Total	Demand	Time
	Thousand dollars														
1960	5,388.2	2,708.1	2,201.6	1,129.2	633.8	447.6	2,129.0	1,275.9	734.0	8,646.4	4,617.8	3,383.2	2,557,313.2	1,357,120.1	621,861.3
1961 2/	5,904.3	2,994.5	2,365.2	1,289.1	717.2	513.4	2,239.1	1,334.0	799.6	9,432.5	5,045.7	3,678.2	2,823,192.4	1,400,205.4	715,760.1
1962 2/	6,420.3	3,280.8	2,528.8	1,448.9	800.6	579.1	2,349.2	1,392.1	865.1	10,218.4	5,473.5	3,973.0	2,907,071.6	1,443,290.8	809,659.0
1963 2/	6,913.0	3,717.7	2,704.2	1,720.0	927.7	667.8	2,496.4	1,280.5	904.5	11,129.4	5,925.9	4,276.5	3,199,243.9	1,543,943.9	955,620.0
1964 2/	7,405.6	4,154.6	2,879.6	1,991.1	1,154.7	756.4	2,643.7	1,168.9	943.8	12,040.4	6,478.2	4,579.8	3,491,416.3	1,644,597.0	1,101,581.0
1965 2/	7,924.0	4,611.6	3,081.2	2,289.8	1,385.6	862.3	2,802.3	1,052.0	981.6	13,016.1	7,049.2	4,925.1	3,770,729.2	1,759,718.8	1,266,181.5
	Indexes (1960=100)														
1960	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1961 2/	110	111	107	114	113	115	105	105	109	109	109	109	110	103	115
1962 2/	119	121	115	128	126	129	110	109	118	118	119	117	114	106	130
1963 2/	128	137	123	152	146	149	117	100	123	129	128	126	125	114	154
1964 2/	137	153	131	176	182	169	124	92	129	139	140	135	137	121	177
1965 2/	147	170	140	203	219	193	132	82	134	151	153	146	147	130	204

Source: Distribution of bank deposits of counties and standard metropolitan areas, Board of Governors of Federal Reserve System, Washington, D.C.

1/ Total deposit includes interbank and government deposits, demand and time deposits and deposits of individuals, partnerships, and corporations.
2/ Estimates for years 1961, 1963, and 1965 based on trends in reported data for 1960, 1962, and 1964.

Table 17.--Per capita bank deposits, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	330.56	205.31	332.66	306.61	563.63
1961	362.23	234.38	349.86	334.48	612.58
1962	401.27	263.44	372.89	367.57	623.88
1963	434.78	307.14	402.65	401.78	670.87
1964	474.72	355.55	440.62	442.66	727.09
1965	507.95	408.89	467.05	478.53	777.95
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	110	114	105	109	109
1962	121	128	112	120	111
1963	132	150	121	131	119
1964	144	173	132	144	129
1965	154	199	140	156	138

Source: Developed from data in tables 3 and 16.

rapidly in Graham County as they did in Cherokee and Clay Counties, possibly because of increased use of farmland for retirement homes.

The increase in the value of farm products sold was reflected in gross farm income and in farm income per farm population (tables 19 and 20). Gross farm income increased at a greater rate in the project area than in the entire State. Gross farm income increased faster in Cherokee and Clay Counties than in Graham County. Graham County farmers had a moderate increase in gross income from 1960 to 1965 despite a decline in the value of farm sales from 1959 to 1964. In Graham County, gross farm income declined from 1960 through 1963, but increased slightly beginning in 1964.

Table 18.--Selected characteristics of agriculture in project area and North Carolina, 1959 and 1964

Item	Unit	Cherokee			Clay			Graham			Project area			North Carolina		
		1959	1964	Percentage change	1959	1964	Percentage change	1959	1964	Percentage change	1959	1964	Percentage change	1959	1964	Percentage change
Farms	Number	825	725	-12.1	629	507	-19.4	587	596	1.5	2,041	1,828	-10.4	190,567	148,202	-22.2
Value of land and buildings per farm	Dollars	6,823	11,569	69.6	9,273	14,959	61.3	6,892	11,959	73.5	7,598	12,726	67.4	15,475	24,442	57.9
All farm products sold	Thousand dollars	1,655	2,399	45.0	1,710	2,710	58.5	554	486	-12.2	3,919	5,596	42.8	727,214	1,067,567	33.9
Value of all crops sold	Thousand dollars	267	313	17.5	192	194	1.5	390	406	4.1	848	913	7.7	568,667	761,839	34.0
Value of livestock and livestock products sold	Thousand dollars	1,388	2,085	50.2	1,519	2,513	65.5	164	79	-51.8	3,071	4,677	52.3	228,546	305,074	33.5
Poultry and poultry products sold	Thousand dollars	939	1,654	76.1	1,170	1,886	61.2	39	7	-81.2	2,149	3,548	65.1	99,387	171,087	72.1

Source: U.S. Census of Agriculture, 1964.

Table 19.--Gross farm income, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	1,519,000	1,882,000	928,000	4,329,000	1,184,490,000
1961	2,637,000	2,725,000	883,000	6,245,000	1,270,422,000
1962	2,664,000	2,754,000	892,000	6,310,000	1,283,793,000
1963	2,685,000	2,775,000	899,000	6,359,000	1,293,680,000
1964	2,787,000	2,881,000	933,000	6,601,000	1,343,001,000
1965	3,123,000	3,228,000	1,045,000	7,396,000	1,504,938,000
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	174	145	95	144	107
1962	175	146	96	146	108
1963	177	147	97	147	109
1964	183	153	101	152	113
1965	206	172	113	171	127

Source: SRDS Consumer Market Data, 1961-66. Standard Rate and Data Service, Inc. Skokie, Ill.

Table 20.--Gross farm income per farm population, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	543	697	331	522	1,209
1961	1,099	1,185	368	880	1,559
1962	1,110	1,197	372	889	1,581
1963	1,119	1,207	375	896	1,593
1964	1,212	1,309	406	971	1,701
1965	1,419	1,537	475	1,138	1,992
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	202	170	111	169	129
1962	204	172	112	170	131
1963	206	173	113	172	132
1964	223	188	123	186	141
1965	261	221	144	218	165

Source: Tables 5 and 19.

MINING AND FORESTRY

The project area is characterized by rough, steep mountain terrain, whose rock formation includes such minerals as talc, marble, corundum, mica, and gold. These minerals, however, are no longer plentiful enough to be mined commercially. Besides the market for some of them has been lost as a result of competition from synthetic materials, while other minerals in the area are no longer needed by industry. As a result, expansion of mining activity is limited more by technology and market potential than by labor availability. There is an ample supply of mine labor available, particularly in the large number of "out" commuters.

The timber resources, for the most part, consist of pine at the lower elevations and of mixed hardwoods in the coves and on the north slopes at high elevations. Thirty percent of the forest area of Cherokee County lies in the Nantahala National Forest. The national forests comprise about 43 percent of the total land acreage in Clay County. There are 163,000 acres of commercial forest land in Graham County, 109,500 acres of which are in Nantahala National Forest.

The principal forestry operations include pulpwood, veneer products, and sawtimber. But the lumber economy has been steadily decreasing as hardwood timber supplies are becoming depleted. In most cases, the cutoff land has not been reutilized. However, an expansion in production of some forest products, such as Christmas trees and charcoal from low-grade hardwoods, may have eased the decline. Use may be made of about 5,000 acres of idle farmland for trees, pastures, or recreational purposes.

RECREATION

Hunting, fishing, and water sports are important recreational activities in the area. About 55 miles of waterways in Cherokee County have been designated as "trout waters" by the North Carolina Wild Life Resource Commission. A potential development area for recreation is 3,000-acre Chatuge Lake in Clay County, part of the Tennessee Valley Authority. The greater part of the forest land in Graham County is certain to remain in the Nantahala National Forest and Joyce Kilmer Memorial Forest. One of the county resorts, Fontana Village, attracts about a million visitors annually.

Although the area has comparatively few hotels and motels, it has potential for an expanded tourist trade. One of the main difficulties impeding tourism, as well as growth and development in other sectors, is the lack of an adequate highway system between the project area and surrounding metropolitan centers. Construction of the proposed Appalachian highways should overcome some difficulties and induce more motels, restaurants, souvenir outlets, and other businesses; but additional improvements in the counties' highway system are also needed to improve the area's economic climate.

RETAIL SALES

Total retail sales activity in the project area was estimated at $22 million in 1965 (table 21). This represents a gain of 12 percent over 1960, against a rise of 35 percent for North Carolina. In the project area, the rise was unevenly distributed among counties as well as over time. The only county with a smaller level of sales in 1965 than 1960 was Clay. Much of the decline in Clay County was due to the decrease in the volume of food sales from 1960 to 1965 (table 22). On a per household basis, retail sales in the project area averaged around $3,000, up 8 percent from 1960 but continuing at two-thirds the household level for North Carolina (table 23).

RETAIL MARKET ATTRACTION

Rural residents depend on nearby trade centers for a great deal of retail goods and services. It is therefore important to determine the degree of polarization or market attraction that the surrounding trade centers have on residents. The degree of market attraction that a trade center has on rural persons increases with the number of shopping opportunities in the center (which in turn is based on the population of the center) and decreases with the distance to the center. More important than mere distance but more difficult to measure is the time or difficulty involved in making the trip.

For example, five major cities are within a 125-mile drive from the town of Murphy, Cherokee County. As shown in table 24, Atlanta, Ga., has the greatest pull on Murphy residents and Greenville, S.C., the least. This means that Atlanta would most likely attract more shoppers from the town than any of the other four cities. Although Atlanta is farther away than the other four cities, it is connected to Murphy by a good road and has a larger trading center with a greater variety of retail services.

Chattanooga, though smaller than Atlanta, is larger than the other candidates and is the closest of the five cities. According to the market attraction formula, Chattanooga ranks second in importance. Knoxville and Asheville vie for third and fourth place. Knoxville is larger, but is farther away and on a less easily traveled road. Using th distance formula in the footnote to table 24, Knoxville would be considered to have a stronger market attraction for Murphy residents than Asheville. But assuming that one can maintain an average speed of around 45 m.p.h. driving to Asheville against 35 m.p.h. to Knoxville, then Asheville would have a stronger attraction.

COMMUNITY FACILITIES

Community facilities provided by local governments in the project area appear to be improving though some problems remain. Because they are in rural areas, most homes in the area have no access to available public sewer and water facilities. Generally, each town provides water and sewer services, fire and police protection, rescue units, and trash collection. What follows is an appraisal of community facilities in the project area with specific references to housing, water supply, sewage disposal, and health care.

Table 21.--Retail sales estimates, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.
1960..	12,164	5,569	1,873	19,606	4,359,564
1961..	12,488	5,619	1,852	19,959	4,415,460
1962..	12,199	5,604	1,862	19,665	4,726,300
1963..	13,465	6,076	2,031	21,572	4,911,652
1964..	13,015	4,560	2,703	20,278	5,308,302
1965..	14,301	4,713	2,927	21,941	5,879,447
	Indexes (1960=100)				
1960..	100	100	100	100	100
1961..	103	101	99	102	101
1962..	100	101	99	100	108
1963..	111	109	108	110	113
1964..	107	82	144	103	122
1965..	118	85	156	112	135

Source: Copyright 1961-66. Sales Management Survey of Buying Power. Sales Management, Inc. New York, N.Y. Further reproduction is prohibited without permission of the publisher.

Table 22.--Retail sales characteristics, project area and North Carolina, 1960-65

Area	Food	Eating and drinking places	General merchandise	Apparel	Furniture and household appliances	Automobile	Gas station	Lumber, building, and hardware	Drugs
	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.	Thous. dol.
Cherokee:									
1960	2,827	425	1,671	445	708	1,957	958	602	427
1961	3,012	452	1,798	459	722	1,898	1,010	590	453
1962	2,848	1/	1,781	437	680	2,000	958	575	426
1963	3,071	474	1,982	462	768	2,249	1,046	624	455
1964	3,904	386	1,115	924	422	2,766	1,087	1,226	463
1965	4,223	430	1,240	957	445	3,211	1,184	1,345	510
Clay:									
1960	2,500	43	432	0	88	120	346	47	171
1961	2,603	45	454	0	88	114	357	42	177
1962	2,547	1/	465	0	86	125	350	42	173
1963	2,705	48	510	0	96	139	376	45	182
1964	1,227	29	354	40	11	630	331	493	164
1965	1,261	30	374	40	11	694	343	513	171
Graham:									
1960	426	66	1,032	54	154	0	90	0	0
1961	422	65	1,032	51	146	0	89	0	0
1962	412	1/	1,056	51	142	0	88	0	0
1963	439	70	1,161	54	158	0	95	0	0
1964	499	184	1,070	63	152	199	362	102	32
1965	531	202	1,171	64	157	227	388	111	35
Project area:									
1960	5,753	534	3,135	499	950	2,077	1,394	649	598
1961	6,037	562	3,284	510	956	2,012	1,456	632	630
1962	5,807	1/	3,302	488	908	2,125	1,396	617	599
1963	6,215	592	3,653	516	1,022	2,388	1,517	669	637
1964	5,630	599	2,539	1,027	585	3,595	1,780	1,821	659
1965	6,015	662	2,785	1,061	613	4,132	1,915	1,969	716
North Carolina:									
1960	978,230	187,409	669,691	258,520	210,168	812,161	359,421	330,777	142,761
1961	1,025,789	194,414	707,688	262,579	210,835	775,135	373,030	321,735	148,695
1962	1,060,187	1/	769,499	273,942	217,674	894,191	385,974	342,235	153,619
1963	1,078,278	211,197	808,453	273,676	232,108	951,441	396,882	350,138	155,031
1964	1,226,497	245,140	723,669	311,733	277,610	1,090,982	443,447	358,780	160,701
1965	1,334,591	276,062	817,150	326,668	294,794	1,275,964	485,018	395,608	178,731

1/ Not available.

Source: Copyright 1961-66. Sales Management Survey of Buying Power. Sales Management, Inc. New York, N.Y. Further reproduction is prohibited without permission of the publisher.

Table 23.--Per household retail sales, project area and North Carolina, 1960-65

Year	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	3,056	3,978	1,216	2,833	3,786
1961	2,864	3,771	1,136	2,668	3,624
1962	2,857	3,786	1,171	2,679	3,837
1963	3,176	4,024	1,302	2,951	3,895
1964	3,129	3,020	1,790	2,824	4,181
1965 1/	3,438	3,121	1,938	3,056	4,587
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	94	95	93	94	96
1962	94	95	96	95	101
1963	104	101	107	104	103
1964	102	76	147	100	110
1965 1/	113	79	159	108	121

1/ Jan. 1, 1965.

Source: Developed from data in tables 4 and 22.

Table 24.--Market attraction of selected cities on Murphy, N.C., 1960

City	Population	Distance from Murphy, N.C.	Driving time from Murphy, N.C.	Market attraction: Distance 1/	Market attraction: Driving time 2/
	Number	Miles	Hours	Units	Units
Atlanta, Ga.	487,455	125	2.5	10.0	10.0
Chattanooga, Tenn.	130,009	82	1.8	6.0	5.2
Asheville, N.C.	60,192	100	2.2	1.6	1.8
Knoxville, Tenn.	111,827	112	3.1	2.6	1.7
Greenville, S.C.	66,188	123	3.3	1.0	1.0

1/ Market attraction = $\frac{P}{d^2}$, where P = population of trade center and d = distance to trade center.

2/ Driving time to trade center was substituted for distance to trade center in the formula given above. The units were converted to a scale ranging from 1 to 10 for both indexes to facilitate comparison.

Housing

A significant problem is the need for replacing 3,000 to 4,000 substandard houses with quality units, particularly low-cost ones. In 1960, the area had more than 8,500 housing units, but only 56 percent of them were sound structures (table 25). Of the approximately 7,500 units that were occupied at the time of the last census, 25 percent were rented. Almost one-sixth of all housing units were classified as dilapidated, and over 30 percent of all units were built in 1929 or earlier. Of the three counties, Cherokee had the poorest housing. Graham County had the highest percentage of sound housing. It also had the lowest percentage of occupancy and the highest percentage of seasonal homes. Clay County had the lowest percentage of dilapidated housing and the highest percentage of recently built structures.

Between 1940 and 1950, when total population in the area reached its highest level, 234 homes, on the average, were built annually. Only 213 homes were built annually in the following decade. The drop in annual construction of new homes may be partly attributed to the subsequent decline in the area population. As mentioned before, the population of the project area is anticipated to decrease further by approximately 6,000 persons by 1980. In this context, there is little economic pressure to increase the number of houses in the area. But there is a need to upgrade the quality of housing as evidenced by the high

Table 25.--Selected housing characteristics in project area, 1960

Characteristic	Cherokee		Clay		Graham		Project area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All housing units	4,897	100.0	1,701	100.0	1,962	100.0	8,560	100.0
Sound	2,648	54.1	959	56.4	1,179	60.1	4,786	55.9
Deteriorating	1,338	27.3	436	25.6	579	29.5	2,353	27.5
Dilapidated	911	18.6	306	18.0	204	10.4	1,421	16.6
Occupied	4,355	88.9	1,494	87.8	1,633	83.2	7,482	87.4
Owner occupied	3,080	62.8	1,177	69.2	1,117	56.9	5,374	62.8
Renter occupied	1,275	26.1	317	18.6	516	26.3	2,108	24.6
Vacant year round	429	8.8	117	6.9	163	8.3	709	8.3
Seasonal	113	2.4	90	5.3	166	8.5	369	4.3
Year structure built:								
1959 to March 1960	151	3.1	43	2.5	61	3.1	255	3.0
1955 to 1958	423	8.6	198	11.7	208	10.6	829	9.7
1950 to 1954	472	9.6	223	13.1	194	9.9	889	10.4
1940 to 1949	1,177	24.1	497	29.2	670	34.1	2,344	27.4
1930 to 1939	856	17.5	262	15.4	482	24.6	1,600	18.7
1929 or earlier	1,818	37.1	478	28.1	347	17.7	2,643	30.8

Source: U.S. Bureau of the Census.

percentage of old and substandard structures, the apparent inadequacy of protective standards and codes that set minimum requirements for construction and occupancy of dwellings, and an expected general shift in housing sites from rural to urban sites.

Water Supply and Sewage Disposal

In 1960, only 23 percent of the housing units obtained their water from a public or group water supply (table 26). Individual wells were used for about 34 percent of the units. Residents of some 3,700 housing units, or 43 percent of the total, obtained drinking water from sources other than public or private water systems. Most of them probably got their water from such easily polluted sources as ponds, springs, or shallow wells. Generally, private suppliers of water are not required to conform to the health standards required of most public or corporate systems.

As recently as 8 years ago, occupants of 4,814 housing units, 56 percent of the total, were disposing of untreated sewage in either streams or shallow latrines (table 27). Public sewers were used by 18 percent of the residents and the remaining 26 percent used septic tanks or cesspools. It was not determined whether the sewage going into public sewers was treated before being dumped into streams.

Residents in much of the area are without access to any type of sanitary disposal facility. The disposal of untreated sewage into streams might create serious health problems for area communities. Efforts should be made to provide each new home with an adequate supply of quality water and a sanitary sewage disposal system.

Most new industries must bear the added expense of providing a water supply and sewage disposal unit. In Clay County, sewer and water services are available only in the town of Hayesville. In 1967, a new well was drilled in Hayesville to replace the surface springs that the community was utilizing. Funds for drilling the well included a grant from the Area Redevelopment Administration. In the town of Robbinsville, Graham County, the supply of water is totally inadequate to meet present and future needs. Area residents realize they have a problem and are currently trying to improve their water and sewage systems. Under a Farmers Home Administration grant of $6,000 for each county, comprehensive sewage and water planning projects are underway to determine the total need for each community.

Health Care

Rural areas in general, and low-income rural areas in particular, have fewer health facilities and personnel available to their population than other socioeconomic areas. Table 28 indicates that the project area is no exception. 4/ These figures, however, do not tell a complete story. They only show the personnel and facilities located in the three counties.

4/ More recent data pertaining to the availability of dentists and physicians suggest that the project area has suffered sufficient attrition in these professions to bring the ratios down to those of all isolated areas.

Table 26.--Source of water for housing units in project area, 1960

Area	Public system or private company		Individual well		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Project area	1,948	22.8	2,931	34.2	3,681	43.0	8,560	100.0
Cherokee	1,287	26.3	1,798	36.7	1,812	37.0	4,897	100.0
Clay	148	8.7	859	50.5	694	40.8	1,701	100.0
Graham	513	26.1	274	14.0	1,175	59.9	1,962	100.0
North Carolina	466,744	41.7	537,507	48.0	115,929	10.3	1/ 1,120,180	100.0

1/ Excludes housing units in places of 50,000 inhabitants or more.

Source: U.S. Bureau of the Census.

Table 27.--Type of sewage disposal for housing units in project area, 1960

Area	Public sewer		Septic tank or cesspool		None or other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Project area	1,530	17.9	2,216	25.9	4,814	56.2	8,560	100.0
Cherokee	1,116	22.8	1,344	27.4	2,437	49.8	4,897	100.0
Clay	38	2.2	552	32.5	1,111	65.3	1,701	100.0
Graham	376	19.2	320	16.3	1,266	64.5	1,962	100.0
North Carolina	466,744	32.9	392,888	35.1	358,690	32.0	1/ 1,120,180	100.0

1/ Excludes housing units in places of 50,000 inhabitants or more.

Source: U.S. Bureau of the Census.

Table 28.--Ratio of selected health-care characteristics to population for the United States, all isolated rural counties, North Carolina and the project area, 1962

Item	United States	All isolated rural counties 1/	North Carolina	Project area	Cherokee	Clay	Graham
Number of health personnel per 1,000 population:							
Dentists	0.5	0.3	0.3	0.3	0.4	0	0
Nurses, total	4.5	2.0	3.1	1.1	0.9	1.4	0.8
Active	3.0	1.3	2.4	0.8	0.9	1.2	0.3
Pharmacists	0.7	0.5	0.4	0.3	0.3	0.2	0.2
Physicians (M.D.)	1.4	0.5	1.0	0.7	0.7	0.6	0.8
General hospital beds per 1,000 population	3.8	2.0	3.5	1.1	2.0	0	0

1/ Counties that are not contiguous to a Standard Metropolitan Statistical Area and do not contain at least one incorporated place of 2,500 people.

Source: Health Manpower Source Book, 1962. U.S. Department of Health, Education, and Welfare.

In North Carolina, as in other States, attention is being paid to dividing the State into medical service regions and districts. The objective is to locate medical services within reach of the majority of the population, and to avoid inefficient duplication of services within a given area. The project area lies within the Franklin health district, which in turn lies within the Asheville health region.

In table 29, the area is considered in terms of the same characteristics as used previously, but this time within the district and regional context. The table clearly reveals a more favorable situation at the district level than that suggested by an analysis of the area by itself, especially when compared with other isolated rural counties. On the other hand, the project area lags behind the Asheville health region. However, there is an implicit assumption that the area's population can and does avail itself of the array of services available at the district and regional levels. Alternatively, some people may enter neighboring States for medical care. This is unlikely to be a common occurrence because public health facilities are not generally available to nonresidents of a State.

There is a circular relationship among poverty, illness, and low productivity, which suggests that the situation is unlikely to improve until increases in potential demand for medical care induced by public programs are transformed into increases in effective demand. This transformation will, no doubt, require increases in the supply of some, if not all, medical services. It will also require the removal of nonpecuniary impediments that may exist between people in need and the provision of medical care.

LOCAL REVENUE

Total receipts from selected tax sources in the three counties generally have been increasing annually, though not as rapidly as in the rest of the State (tables 30-34). This trend is also evident for the assessed value of property for taxes (table 35). However, levels per household range from one-third to two-thirds the levels of counterparts at the State level, pointing to a limited tax base for the project area. This suggests that financing difficulties are likely to be encountered if local taxes are to be used as a source of financing for needed improvements in community facilities.

LOCAL GOVERNMENT EXPENDITURES

Total expenditures by local governments in the project area totaled nearly $3 million in 1962 (table 36). This amounted to $106 per capita and $402 per household, or about half of the corresponding State outlays. Sources of funds for these expenditures included transfers from State and Federal governments as well as local tax collections. Consequently, the expenditures listed in tables 36 and 37 are not directly reflected in the previous discussion on local tax collections.

Overall, expenditures by local governments increased over 146 percent from 1957 to 1962. A large part of the increase was for education, as educational

Table 29.--Ratio of selected health-care characteristics to population for the Asheville region, Franklin district, and the project area, 1962

Item	Asheville region	Franklin district	Project area
Number of health personnel per 1,000 population:			
Dentists	0.4	0.4	0.3
Nurses, total	3.3	1.7	1.1
Active	2.5	1.3	0.8
Pharmacists	0.5	0.3	0.3
Physicians (M.D.)	1.1	0.7	0.7
General hospital beds per 1,000 population	3.4	3.1	1.1

Source: Health Manpower Source Book, 1962. U.S. Department of Health, Education, and Welfare.

Table 30.--Tax due, individual taxable returns, project area and North Carolina, 1960-65

Year beginning July	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	107,563	21,862	49,177	178,602	78,827,290
1961	120,859	20,135	42,753	183,747	87,720,800
1962	152,361	25,347	53,151	230,859	96,556,846
1963	171,578	30,422	58,456	260,456	111,109,196
1964	190,796	35,498	63,762	290,056	125,661,546
1965	206,521	40,444	68,848	315,813	137,947,758
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	112	92	87	103	111
1962	142	116	108	129	122
1963	160	139	119	146	141
1964	177	162	130	162	159
1965	192	185	140	177	175

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 31.--Sales and use taxes: Gross collection, project area and North Carolina, 1960-65

Year beginning July	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	197,850	30,525	70,009	298,384	90,097,652
1961	289,878	46,038	93,951	429,867	131,984,135
1962	332,735	62,672	112,233	507,640	149,350,510
1963	351,986	60,937	120,808	533,731	161,049,132
1964	388,188	64,602	126,598	579,388	173,479,606
1965	432,961	71,673	135,587	640,221	193,470,413
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	147	151	134	144	146
1962	168	205	160	170	166
1963	178	200	173	179	179
1964	196	212	181	194	192
1965	219	235	194	215	215

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 32.--Collections from intangible property tax, project area and North Carolina, 1960-65

Year beginning July	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	13,983	1,670	3,164	18,817	10,159,579
1961	21,359	1,934	3,223	26,516	12,409,733
1962	15,855	2,168	4,045	22,068	12,131,303
1963	19,715	4,211	4,765	28,691	13,508,486
1964	18,957	3,887	4,082	26,926	15,193,062
1965	21,394	2,451	5,458	29,303	17,076,174
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	153	116	102	141	122
1962	113	130	128	117	119
1963	141	252	151	152	133
1964	136	233	129	143	150
1965	153	147	172	156	168

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 33.--License tax collections, project area and North Carolina, 1960-65

Year beginning July	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960	16,609	6,702	6,185	29,496	7,274,336
1961	13,220	2,172	5,823	21,215	6,975,103
1962	12,512	1,818	4,520	18,850	7,073,996
1963	11,140	2,131	5,107	18,378	5,765,347
1964	14,465	2,062	7,614	24,141	7,432,408
1965	19,925	2,712	5,348	27,985	8,332,931
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	80	32	94	72	96
1962	75	27	73	64	97
1963	67	32	83	62	79
1964	87	31	123	82	102
1965	120	40	86	95	114

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 34.--Total municipal taxes, project area and North Carolina, 1960-65

Year beginning July	Cherokee (Andrews and Murphy)	Clay (Hayesville)	Graham (Robinsville)	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960 1/	106,987	8,017	14,109	129,113	66,963,434
1961	107,343	8,368	14,732	130,443	72,312,189
1962 1/	108,995	9,020	15,572	133,587	76,443,183
1963	110,647	9,673	16,412	136,732	80,574,177
1964 1/	127,548	10,193	17,816	155,557	87,565,459
1965	144,449	10,714	19,220	174,383	94,556,942
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	100	104	104	101	108
1962	102	113	110	103	114
1963	103	121	116	106	120
1964	119	127	126	120	131
1965	135	134	136	135	141

1/ Estimates.

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 35.--Assessed value of property locally taxable, project area and North Carolina, 1960-65

Year beginning July	Cherokee	Clay	Graham	Project area	North Carolina
	Dollars	Dollars	Dollars	Dollars	Dollars
1960 1/	11,289,967	3,099,939	7,657,226	22,047,132	5,438,365,000
1961	12,485,994	3,207,108	7,877,526	23,570,628	5,965,580,273
1962 1/	12,105,303	4,572,188	8,036,337	24,713,828	6,598,707,000
1963	11,724,612	5,937,268	8,195,149	25,857,029	7,231,834,155
1964 1/	12,936,532	6,234,334	8,089,391	27,260,257	7,582,396,000
1965	14,148,453	6,531,400	7,983,634	28,663,487	7,950,958,407
	Indexes (1960=100)				
1960	100	100	100	100	100
1961	111	103	103	107	110
1962	107	147	105	112	121
1963	104	192	107	117	133
1964	115	201	106	124	139
1965	125	211	104	130	146

1/ Estimates.

Source: Statistics on Taxation: Biennial Report of Department of Research, State of North Carolina, 1960, 1962, 1964, 1966.

Table 36.--Distribution of expenditures by local government, project area and North Carolina, 1962

Item	Cherokee		Clay		Graham		Project area		North Carolina	
	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent
Education	1,131.0	77.4	412.0	58.8	532.0	67.7	2,075.0	70.4	465,853.0	47.4
Highways	50.0	3.4	1.0	0.1	4.0	0.5	55.0	1.9	186,485.0	19.0
Public welfare	72.0	4.9	254.0	36.3	170.0	21.6	496.0	16.8	86,410.0	8.8
Hospitals	18.0	1.2	3.0	0.4	0	0	21.0	0.7	69,709.0	7.1
Health	1.0	0.1	1.0	0.1	8.0	1.0	10.0	0.3	12,767.0	1.2
Police	33.0	2.3	4.0	0.6	13.0	1.7	50.0	1.7	30,348.0	3.2
Correction	4.0	0.3	2.0	0.3	3.0	0.4	9.0	0.3	21,964.0	2.2
Natural resources	8.0	0.5	1.0	0.1	8.0	1.0	17.0	0.6	25,338.0	2.6
General control	50.0	3.4	9.0	1.3	24.0	3.1	83.0	2.8	18,891.0	1.9
General public buildings	9.0	0.6	3.0	0.4	5.0	0.6	17.0	0.6	8,008.0	0.8
Interest on general debt	30.0	2.1	11.0	1.6	7.0	0.9	48.0	1.6	23,600.0	2.4
General government and financial administration	55.0	3.8	0	0	12.0	1.5	67.0	2.3	33,028.0	3.4
Total	1,461.0	100.0	701.0	100.0	786.0	100.0	2,948.0	100.0	982,401.0	100.0

Source: U.S. Census of Government, Government of North Carolina, 1962.

Table 37.--Distribution of expenditures by local government, project area and North Carolina, 1957

Item	Cherokee		Clay		Graham		Project area		North Carolina	
	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent	Thous. dol.	Percent
Education	272.1	58.5	87.7	25.4	166.1	43.0	525.9	43.9	294,011.0	43.5
Highways	0	0	0	0	0	0	0	0	150,876.0	22.3
Public welfare	48.3	10.4	203.3	58.8	160.3	41.5	411.9	34.4	52,944.0	7.8
Hospitals	0.2	0.0	1.2	0.3	0	0	1.4	0	46,558.0	6.9
Health	15.9	3.4	2.6	0.8	5.1	1.3	23.6	2.0	9,544.0	1.4
Police	12.2	2.6	4.5	1.3	8.5	2.2	25.2	2.1	21,759.0	3.2
Correction	4.0	0.9	3.3	1.0	0.9	0.2	8.2	0.7	14,955.0	2.3
Natural resources	6.5	1.4	4.6	1.3	6.4	1.7	17.5	1.5	17,621.0	2.7
General control	38.5	8.3	16.9	4.9	19.6	5.1	75.0	6.3	26,158.0	3.9
General public buildings	6.9	1.5	2.2	0.6	4.4	1.1	13.5	1.1	6,409.0	0.9
Interest on general debt	41.1	8.8	13.8	4.0	10.0	2.5	64.9	5.4	17,102.0	2.5
General government and financial administration	19.6	4.2	5.8	1.6	5.4	1.4	30.8	2.6	17,332.0	2.6
Total	465.3	100.0	345.9	100.0	386.7	100.0	1,197.9	100.0	675,269.0	100.0

Source: U.S. Census of Government, Government of North Carolina, 1957.

outlays increased from $526,000 to $2.1 million, a gain of nearly 300 percent. At the State level, overall expenditures increased only 45 percent, but outlays for education increased about 150 percent.

In 1962, Cherokee County spent 77 percent, Graham County spent 68 percent, and Clay County spent 59 percent of total outlay for education. On a per capita basis, Graham County expended more at $84 than Clay County at $75. Cherokee County spent only $71 per capita. The per capita expenditure for education for each of the three counties was well below the level of $100 for North Carolina, indicating a need for more funds for education in the project area.

Expenditures for public welfare ranked second to education in the project area. In 1962, expenditures for education and public welfare amounted to about 87 percent of all outlays (table 36). In each county, total expenditures for public welfare increased moderately from 1957 to 1962, but declined as a proportion of all expenditures. In 1962, public welfare comprised about 17 percent of local government costs, compared with about 9 percent for the entire State. Of the three counties, Clay had the greatest welfare load, spending 36 percent of its total outlay ($46 per capita) while Cherokee County had the smallest, spending only 5 percent or less than $5 per capita. Graham County expenditures for welfare were about $27 per capita, or 22 percent of its total outlay.

INDEXES OF DEVELOPMENT

The array of descriptive statistics supporting the preceding discussion is meaningful, but rather detailed and difficult to grasp simultaneously. In this section, this wide range of data is reduced, through selection and indexing, to a few numbers indicating growth rates and comparative levels of economic activity in the project area and in North Carolina as a whole. The results of this process suggest that the project area has been growing in total more slowly than the State. However, with outmigration and smaller increases in household numbers, growth in the level of economic activity per household in the project area has about kept up with that of the State. On the other hand, the level of economic activity per household remained about two-thirds the level of the State (fig. 5).

The 12 variables selected for indexing are listed in tables 38 and 39. These data, together with the number of households in table 4 and the farm population in table 5, were the total data used to compute the indexes for the project area and the State.

Index numbers tracing the growth rates of economic activity per household for the project area and the State are drawn directly from tables 38 and 39. Results of computations are shown in columns one and two of table 40. Weights used in computing these index numbers are listed in column one of tables 38 and 39. The weights were subjectively determined by economists in the Economic Research Service. Individual weights were greater than 1 and less than 100 and collectively add to 100. Larger weights were assigned to variables that were judged to be economically more important or statistically more reliable.

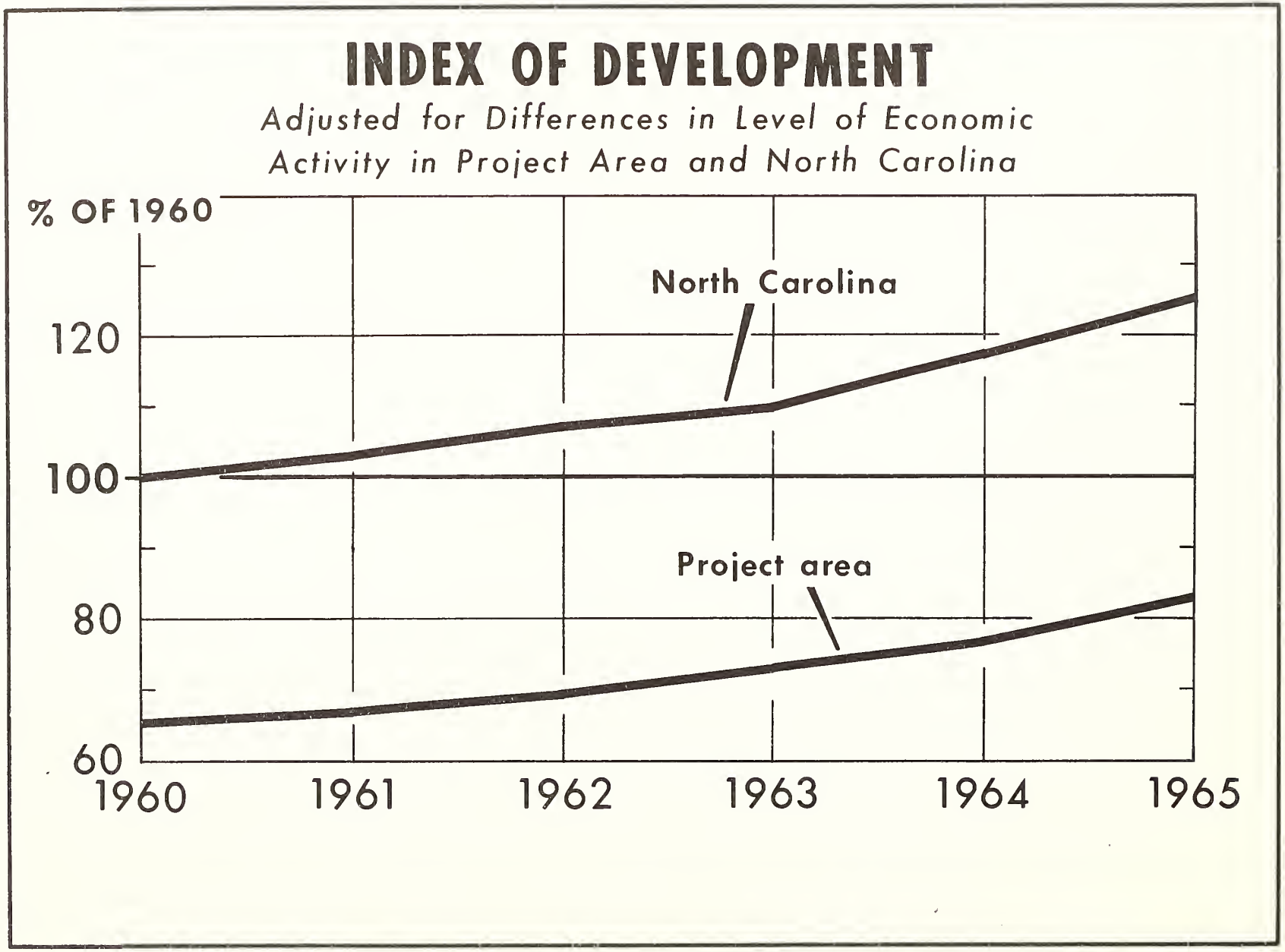

INDEX OF DEVELOPMENT
Adjusted for Differences in Level of Economic Activity in Project Area and North Carolina
% OF 1960
120
100
80
60
North Carolina
Project area
1960
1961
1962
1963
1964
1965

Figure 5

Table 38.--Household level of development, project area, 1960-65

Indicator	Unit	Weight	Per household: Project area					
			1960	1961	1962	1963	1964	1965
Annual average weekly earnings (all industries) 1/	Dollars	13	57.00	59.00	61.00	61.00	65.00	67.00
Net effective buying income	Dollars	13	4,082.659	3,548.395	3,802.588	3,946.922	4,244.568	4,560.863
Total bank deposits	Dollars	7	1,249.479	1,271.524	1,392.152	1,561.313	1,676.935	1,827.855
Work force	Persons	20	1.184	1.138	1.134	1.116	1.152	1.250
Gross farm income 2/	Dollars	4	521.566	879.577	888.732	895.633	970.735	1,137.846
Total value of principal crops 2/	Dollars	3	184.747	222.077	218.797	201.542	196.604	209.446
Retail sales	Dollars	15	2,833.236	2,668.315	2,679.155	2,951.025	2,824.233	3,055.849
Individual tax returns	Dollars	5	25.809	24.565	31.452	35.630	40.397	43.531
Sales and use tax	Dollars	5	43.119	57.468	69.160	73.013	80.694	89.209
Assessed value of property	Dollars	5	3,186.002	3,151.153	3,367.007	3,537.213	3,796.693	3,992.129
Intangible property tax	Dollars	5	2.719	3.545	3.006	3.925	3.750	4.081
License tax	Dollars	5	4.262	2.836	2.568	2.514	3.362	3.897

1/ Per worker.
2/ Per farm population.

Source: Tables 4, 5, 8, 13, 15, 16, 18, 19, 21, 30-33, and 35.

Table 39.--Household level of development, North Carolina, 1960-65

Indicator	Unit	Weight	Per household: North Carolina					
			1960	1961	1962	1963	1964	1965
Annual average weekly earnings (all industries) 1/	Dollars	13	69.00	71.00	74.00	76.00	80.00	84.00
Net effective buying income	Dollars	13	5,882.865	5,590.462	5,850.481	6,027.278	6,449.211	6,930.086
Total bank deposits	Dollars	7	2,221.083	2,308.573	2,360.190	2,535.103	2,749.773	2,941.837
Work force	Persons	20	1.553	1.498	1.515	1.516	1.529	1.552
Gross farm income 2/	Dollars	4	1,208.663	1,559.182	1,580.636	1,592.809	1,701.077	1,991.976
Total value of principal crops 2/	Dollars	3	678.635	830.798	859.016	851.518	907.727	821.360
Retail sales	Dollars	15	3,786.377	3,623.622	3,837.184	3,895.195	4,180.718	4,587.010
Individual tax returns	Dollars	5	68.463	71.990	78.392	88.115	98.969	107.623
Sales and use tax	Dollars	5	78.252	108.315	121.255	127.720	136.629	150.941
Assessed value of property	Dollars	5	4,723.345	4,895.759	5,357.354	5,735.227	5,971.754	6,203.157
Intangible property tax	Dollars	5	8.824	10.184	9.849	10.713	11.966	13.322
License tax	Dollars	5	6.318	5.724	5.743	4.572	5.854	6.501

1/ Per worker.
2/ Per farm population.

Source: Tables 4, 5, 8, 13, 15, 16, 18, 19, 21, 30-33, and 35.

Table 40.--Indexes of development, project area and North Carolina, 1960-65 1/

[1960=100]

Year	Index of development for North Carolina	Unadjusted index of development for project area	Level of development in project area compared with North Carolina in 1960	Adjusted index of level of development for project area	Adjusted index of development for project area
	(1)	(2)	(3)	(4)	(5)
1960....	100.00	100.00	65.64	65.64	65.64
1961....	103.15	101.79	65.64	64.78	66.82
1962....	107.32	105.47	65.64	64.51	69.23
1963....	109.97	110.93	65.64	66.21	72.81
1964....	117.58	116.77	65.64	65.19	76.64
1965....	125.56	126.58	65.64	66.18	83.09

1/ Project area indexes were adjusted for differences in level of development in project area and State.

The index numbers computed by using these weights were found to imply slightly slower growth rates and slightly higher levels of household activity in the project area in comparison with the State, than if equal weights were applied. The weights used resulted in index numbers that, in our judgment, more accurately summarize the wide array of numbers shown in tables 1 through 37.

The index numbers listed in columns one and two of table 40 show the growth rates in economic activity per household from 1960 through 1965 for the project area and North Carolina. Each rate indicates an annual gain of about 5 percent per household. The numbers in column one, table 40, are represented by the line in figure 5 illustrating the economic growth per household in North Carolina. The line representing economic growth per household in the project area in the same figure is based on the numbers in column five, table 40. These numbers were computed by adjusting the weighted rate of growth from 1960 to 1965 in the project area (column two, table 40) for the difference in the level of economic activity per household in the project area and the State in 1960.

The procedure for adjusting the rate of growth index per household for the project area uses the data in table 41. The adjustments were based on the relative difference per household between the State and project area in 1960. Data for other years (1961-65) are given for comparison. These data show there was little overall change in the level of economic activity per household between the project area and North Carolina for the years 1960 through 1965.

In 1960, each of the variables on a household basis was lower in the project area than in the state, ranging from a low of 27 percent to a high of 83 percent. The weighted average for these variables in 1960 was 65.64 percent (column three, table 40). This percentage multiplied by the index number for each year listed in column two, table 40, yields the rate of growth indexes per household for the project area, adjusted for the difference in the level of economic activity per household between the project area and the State. The adjusted index numbers are listed in column five, table 40. The numbers in column five underlie the line representing economic growth per household in the project area in figure 5.

The numbers in column four, table 40, trace the change from 1960 to 1965 in the level of household activity in the project area relative to the State. As these numbers indicate, little change occurred in the position of the project area in relation to the State during the period observed.

Change in total economic activity is the combined result of changes by household and changes in the number of households. Total economic activity increased by about 40 percent in the State from 1960 through 1965, compared with about a 32-percent gain in the project area.

IMPLICATIONS

Although the area lost a moderate number of people through outmigration from 1960 to 1965, it had a positive gain in both total economic activity and

Table 41.--Ratio of project area to North Carolina, by household, 1960-65

Indicator	Weight	Per household					
		1960	1961	1962	1963	1964	1965
Annual average weekly earnings (all industries) 1/	13	83	83	82	80	81	80
Net effective buying income	13	69	64	65	66	66	66
Total bank deposits	7	56	55	59	62	61	62
Work force	20	76	76	75	74	75	81
Gross farm income 2/	4	43	56	56	56	57	57
Total value of principal crops 2/	3	27	27	26	24	22	26
Retail sales	15	75	74	70	76	68	67
Individual tax returns	5	38	34	40	40	41	40
Sales and use tax	5	55	53	57	57	59	59
Assessed value of property	5	68	64	63	62	64	64
Intangible property tax	5	31	35	31	37	31	31
License tax	5	68	50	45	55	57	60

1/ Per worker.
2/ Per farm population.

Source: Tables 38 and 39.

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

Official Business

economic activity per household (table 42). This is evidence that the population is striving to improve its level of living. Present trends imply. however, that some resources are not available in sufficient quantities or that they are not presently organized in a manner to provide for a higher growth rate needed to raise the level of economic activity by household.

Table 42.--Summary indexes for 1965, project area and North Carolina
[1960=100]

Item	Project area	North Carolina
Total economic activity	132	140
Economic activity per household	127	126
Number of households	104	111
Relative level of economic activity per household	66	100

Source: Tables 4 and 40.

Programs are needed to develop expanding local economic opportunity and to help members of households move closer to the State's level of living. Components of such programs were mentioned before in this report. In closing, we shall focus on the intensity of economic stimulation needed from such programs.

In figure 5, the annual rates of economic growth from 1960 to 1965 were shown to be about 5 percent for the project area and the State. Should these trends continue, the project area may never reach the State's level of economic activity. Therefore, if the area is to catch up with the State, the area must accelerate its growth rate. If the project area's growth rate increased through program implementation to around 6 percent from the current 5 percent annually, it might take 50 years for the project area to catch the State. On the other hand, if the project area's annual growth rate could be doubled (from 5 to 10 percent) by using more intensive development programs, the project area could catch up with the State in 8 to 10 years.

☆U. S. GOVERNMENT PRINTING OFFICE : 1968 343-491/25